

STATE OF MONTANA

JOB DESCRIPTION

Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.

Job Title: Experimental and Research Project Manager

Position Number: 40032

Location: Helena

Department: Transportation

Division and Bureau: Engineering Division/Engineering Operations Bureau

Section and Unit: Research Section

Job Overview:

This position is responsible for managing complex experimental and research projects for all aspects of a project through the entire lifecycle, from project concept through final reporting and implementation. Project management comprises planning, executing, monitoring, controlling, and closure activities by applying recognized project management principles, methodologies, and practices. The incumbent assists in defining project goals and objectives, establishing methods and means of accomplishing those objectives, and presenting findings and recommendations to enhance the operations and activities of the Department. The position manages contracted staff. The position reports to the Research Section Supervisor (#40067).

Essential Functions (Major Duties or Responsibilities):

Program and Project Management – 80%

Evaluates various methods, materials, etc. to solve construction, maintenance, and safety issues; and enhance quality, safety, efficiency, cost-effectiveness, and environmental sensitivity. Manages all aspects of the Experimental Program. Manages multiple complex experimental and research projects and research consultants.

- Responsible for all aspects of a project through the entire lifecycle of the project (project initiation, planning, execution, control, and closing) through recognized project management principles, methodologies, and practices.

- Provides guidance and technical assistance to centralized and District staff, contractors, local/tribal officials, and others on experimental and research projects as well as implementing new methods, materials, and technologies as a result of research findings to ensure that experimental and research projects and program operations meet various needs.
- Develops, tracks, reports, and evaluates qualitative and quantitative (e.g., ROI and B/C) performance measures for the Experimental and Research Programs and projects.
- Provides quality assurance to ensure the experimental and research projects meet the identified needs, expectations, and requirements of customers and stakeholders, following project management guidelines.
- Develops and coordinates strategies for statewide implementation of experimental and research findings and recommendations to ensure consistency with long-range planning objectives, State and federal regulations and requirements (e.g., environmental, economic, safety, etc.), and professional standards.

Experimental Projects

- Analyzes current and alternative methods, materials, and technologies and develops new approaches to project design needs.
- Coordinates with designers, consultants, contractors, and vendors to ensure projects meet multiple needs and requirements and are consistent with experimental project objectives and opportunities
- Develops project work plans and ensures project documents contain required special provisions and define appropriate control and test sections. Attends project meetings to provide expertise on experimental features and processes.
- Observes construction and performance of experimental features. Reports on construction activities, including compliance to the design and special provisions and identifying activities that may affect project performance.
- Conducts field evaluations of experimental projects after construction to determine performance of the control and experimental features. Develops and presents reports, lessons learned, and recommendations based upon experimental project outcomes.
- Analyzes projects to determine if similar results related to structural integrity, useful life, maintenance requirements, and other characteristics can be attained in a more efficient and/or cost-effective manner. Explains and defends project methodologies, assumptions, findings, and recommendations as necessary.

Research Projects

- Assembles research project teams. Oversees (organize, direct, and review) the work of team members.
- Develops research project scopes of work and subsequent contracts based on securing consensus from individuals both inside and outside the Department.

- Organizes, directs, reviews, and approves the work of consultants for the conduct of research projects. Serves as the primary communications resource between consultants and MDT/technical panels. Evaluates research staff and consultant performance.
- Manages and balances the triple constraints of time, cost, and scope for projects. Carefully regulates project scope by securing consensus on what changes can be managed and determining which requested changes should or should not be added to the project.
- Implements a change management process on all projects. Considers impacts of changes on the project itself, and on existing staff, current business processes, etc. Effectively estimates the impact of the change in all areas. Identifies and, if necessary, implements project contingency plans to account for possible project obstacles.
- Develops and implements research methods, procedures, and standards to ensure that research projects deliver reliable results; conform with State and federal requirements; and add value to the organization.
- Manages contract budgets, including monitoring of expenditures, time management, invoice processing, and deliverable validation.

Technology Transfer – 15%

Serves as a technical resource on experimental and research projects for Department managers, agencies, contractors, and others. Attends meetings and conferences, participates in ongoing education and training, and shares information from other agencies (e.g., state DOTs) with MDT staff.

- Reviews and responds to information requests, provides information currently available, synthesizes information that is not currently available, and determines the need for additional research or experimental projects.
- Reports on experimental and research projects at biannual construction and preconstruction conferences.
- Conducts an annual meeting with construction, maintenance, preconstruction, and FHWA staff to discuss completed, active, and pending experimental projects and implementation efforts to ensure full communications among all areas.
- Writes articles for various MDT and trade newsletters, technical journals, and research papers.
- Represents the Department at a variety of meetings and events, such as AASHTO and TRB conferences. Exchanges information on research methods, tools, findings, opportunities, and related details to enhance research programs and incorporate relevant findings from other organizations.

Other Duties as Assigned – 5%

Supervision

The number of employees supervised is: 0

Physical and Environmental Demands:

- Ability to walk over uneven terrain or in water
- Extensive travel (10,000 -15,000 miles/year) within the state to project locations, and out of state travel by airline to national conferences and meetings
- Exposure to extreme weather, loud noises, high temperature/irritant substances, and high-speed traffic
- Lifting heavy objects (e.g., construction materials, equipment, etc.) weighing up to 50 lbs.
- Walking, standing, bending over prolonged periods
- Remaining seated for extended periods of time

Knowledge, Skills and Abilities (Behaviors):

- Scientific methodologies and research strategies
- Technical and statistical analysis techniques
- Program and project management principles, methodologies, and practices
- Highway engineering and standards, materials, and maintenance principles and applications
- Contract management
- Ability to apply knowledge in new and innovative ways to find unique and unprecedented solutions to problems associated with projects, policies, construction procedures and methods.
- Ability to deal with changing priorities, technology, policy, regulation, due dates, etc.
- Ability to meet inflexible deadlines
- Ability to multi-task
- Analyzing – Inductive and Deductive Reasoning
- Decision making
- Creative thinking and problem solving
- Ability to develop and maintain effective working relationships
- Demands for accuracy in all aspects of work
- Effective, professional communicating in writing, in person and over the phone, including conference presentations, writing technical reports, and translating technical information to varied audiences
- Reading and interpreting construction plans

Minimum Qualifications (Education and Experience):

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to bachelor's degree in construction, materials, engineering or a related field.

This position requires a minimum of 3 years of experience in construction, materials, engineering, and/or other related experience.

Certifications, licensure, or other credentials include: N/A

Alternative qualifications include: Any combination of additional related work experience and education equivalent to the minimum qualifications.

Special Requirements:

☐

Fingerprint check

☒

Valid driver's license

☐

Background check

☐

Other; Describe

Union Code

Safety Responsibilities

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

Signatures

My signature below indicates the statements in the job description are accurate and complete.

Immediate Supervisor	Title	Date
-----------------------------	--------------	-------------

Administrative Review	Title	Date
------------------------------	--------------	-------------

My signature below indicates that I have read this job description.

Employee	Title	Date
-----------------	--------------	-------------

Human Resources Review

Job Code Title: Operations Research Analyst

Job Code Number: 40032

Pay Band: 6

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

☐ FLSA Exempt

☒ FLSA Non-Exempt

☐ Telework Available

☐ Telework Not Available

☐ Classification Complete

☐ Organizational Chart attached

Human Resources:

Signature

Title

Date